

Week of December 16, 2002: MDOT Flash Facts

Topic: Treatment of Snowy/Icy Roads and Winter Driving

Facts or Openers for use during the week:

- The leading cause of death during winter storms is transportation crashes (according to the Federal Emergency Management Agency). Preparing your vehicle, knowing how to handle slippery roads and knowing what to do if you are stranded are the keys to safe winter driving.
- Over 22,000 crashes occurred on snow or ice covered road surfaces in Maine from 1999 through 2001. These crashes resulted in more than 50 deaths and over 7,000 injuries.
- Even when skies are clear, roads can become slippery due to re-freezing of melted snow or ice-melt, especially on bridges and in shady areas.
- During a storm, roads will often have a layer of slush that can be very slippery.

Monday:

Snow, ice and freezing rain bond to cold road surfaces and can become packed by traffic. Depending on temperature and other factors, ice and snow can remain bonded to the pavement for days, even with plowing and sand and salt applications.

Maine DOT has been implementing an anti-icing program in recent years that has also been used successfully in many other states to minimize ice and packed snow bonding from occurring. The objectives are to provide:

- Bare pavement more quickly after a storm.
- Better traveling conditions for the public.
- A more cost-effective approach to winter road treatment.

Many Maine highways are treated prior to storms with a salt brine application (salt dissolved in water) to prevent bonding of snow and ice to the road surface. Salt brine is sprayed on the road several hours before any precipitation starts so that a fine salt powder is ready to start working when the storm begins.

-The goal of anti-icing is not to melt the snow or ice, but to prevent snow and ice from bonding to the pavement. Snow build-up can then be plowed off the road.

-This anti-icing program emphasizes treatment from the pavement up (minimizing snow and ice build-up) rather than plowing first (fighting packed snow and ice from the top down).

As a result of this anti-icing program, you will likely see slush on the road instead of sanded ice or hard packed snow. Driving is different as well. While stopping distance is improved in slush, it is still slippery and there is greater potential for hydroplaning if speeds become excessive.

Not all Maine roads are treated in this manner.

Winter Storm Driving Tips:

- Driving during and after a winter storm is very dangerous, no matter how roads are treated or plowed. **REDUCE YOUR SPEED** and increase the following distance between you and the vehicle ahead. Many storm related crashes are due to motorists driving faster than the conditions allow.
- Observe reduced speed limits on the Turnpike and Interstate.

*Prepared by:
Safety Management
Systems Management Division
Bureau of Planning
Maine Department of Transportation*

Winter Storm Driving Tips (cont.):

- Bridge decks and shady areas often freeze sooner than adjacent pavement, so pay special attention in these areas.
- Reduce speed on downhill road sections. Shift into a lower gear or use your brakes gently.
- Allow extra time to reach your destination.

Wednesday

Flash Facts has been providing winter storm driving tips and information on anti-icing techniques being used on some Maine roads. The objective of anti-icing is to prevent snow and ice from bonding to the road surface. Here's a little more on how that's done.

- Rock salt dissolved in water (known as salt-brine) is often sprayed onto the road surface prior to the onset of a winter storm to begin the process of preventing snow and ice from bonding to the pavement. Additionally, rock salt is applied directly to the road.
- The water in the brine evaporates, leaving dry salt on the pavement to start working at the beginning of the storm.
- The salt on the road surface mixes with the snow and prevents it from freezing and bonding to the road. The snow and ice can then be more effectively plowed from the road.
- What's on the road instead of hard packed snow or ice is more like a slush. This requires driving for the conditions, but generally provides for better stopping conditions than roads that have snow and ice bonded to the pavement.
- Roads return to bare, dry conditions sooner with this method.

Tips for safe driving when snow plows and other winter maintenance vehicles are on the road:

- Leave plenty of room for plows and maintenance vehicles:
 - Plows may need to stop or change lane position.
 - Oncoming plows will be clearing the centerline, so move a safe distance to your right.
 - Visibility when you are near a plow will often be reduced due to blowing snow.
- Road conditions ahead of plows will be worse than behind them, so drive carefully, maintain a safe following distance, and resist the urge to pass.
- Always remember that driving during and after a winter storm is very dangerous, no matter how well roads are treated or plowed. Reduce speed and increase the following distance between you and the vehicle ahead.
- Leave early, REDUCE YOUR SPEED and expect delays--it's better to be late than it is to hurry and end up off the road, or worse.
- Observe reduced speed limits on the Turnpike and Interstate.

Friday

Flash Facts has been providing winter driving tips and information on anti-icing techniques currently being used on some Maine roads. Early applications of salt brine and rock salt are being used on many roads to prevent the snow or ice from bonding to the road surface.

- This approach requires less salt than would be required to de-ice a road after packed snow or ice has bonded to the road.
- Roads clean up more quickly after storms with these methods, returning the roads to bare, dry conditions.
- Driving conditions may be difficult during storms, so drive with extreme care. The anti-icing approach leads to slush on the roads rather than sanded ice or hard packed snow.
- The anti-icing allows for better removal of snow and ice and quicker restoration of a bare pavement surface. Adjust your speed to conditions.

*Prepared by:
Safety Management
Systems Management Division
Bureau of Planning
Maine Department of Transportation*

Winter Storm Driving Tips:

- Driving in winter can be very dangerous, no matter how well roads are maintained. **REDUCE YOUR SPEED** and increase following distance.
- Observe reduced speed limits on the Turnpike and Interstate.
- Do not drive in white-out conditions. Pull off the road to a safe location (not the shoulder) until conditions improve.
- Four-wheel drive provides no additional safety for braking or turning. Excessive speed and worn tires on a slushy surface can lead to hydroplaning.
- Use brakes carefully, applying them early and gently.
- Turn on your headlights so you can see and be seen. It's the law.
- Take your time and enjoy Maine's winter beauty.